



Community Public Water Systems



Robert Foster

Division of Water Supply

Department of Environment and Conservation

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Water Resources Technical Advisory Committee



Where Do We Get Our Drinking Water?



**Ground Water
Wells & Springs**



Caves



Rivers and Streams



Lakes & Reservoirs



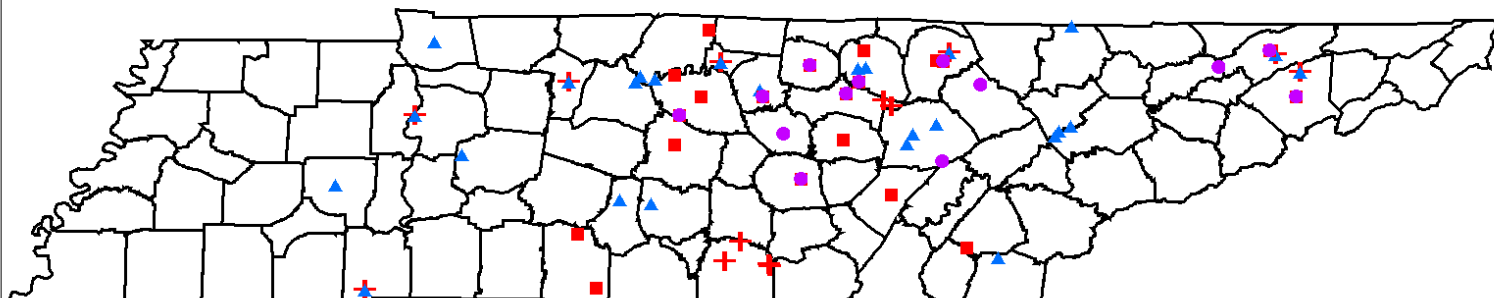
Slime forming bacteria in water distribution pipe





Disinfection Byproduct Issues

Parent and Purchasing Systems with HAA5 and THM Violations



Legend

Intakes (Parent) with HAA5 Violations



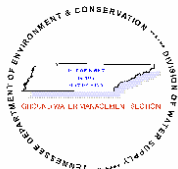
Intakes (Parent) with THM Violations



Purchasing Systems with HAA5 Violations



Purchasing Systems with THM Violations





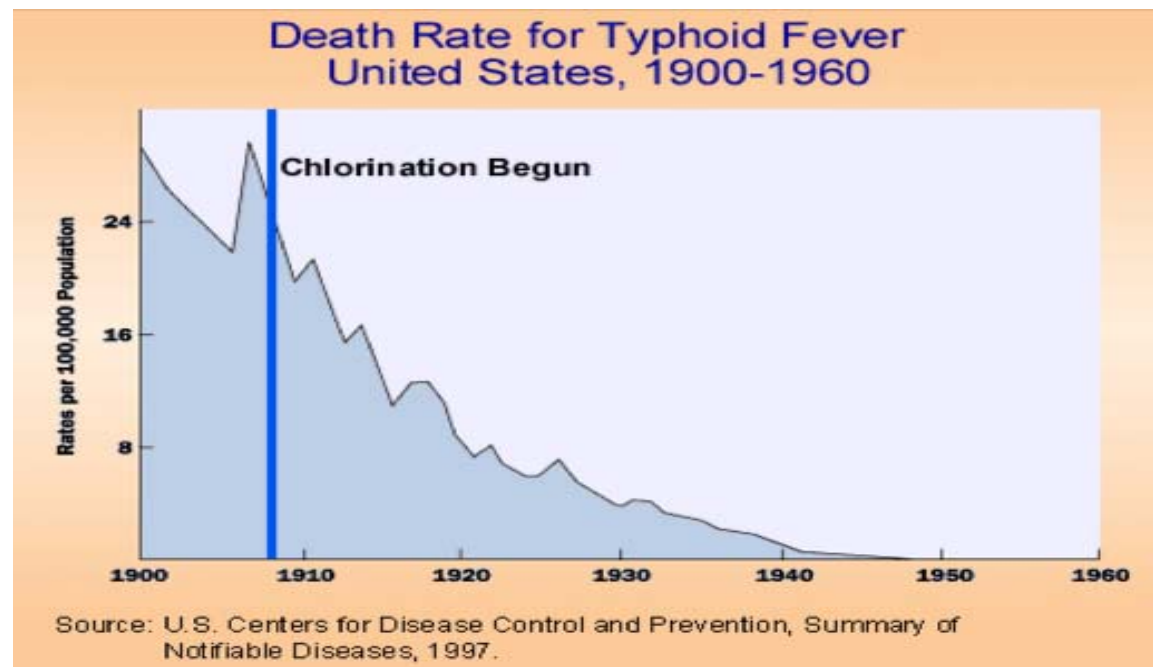
Disinfection and Filtration

Disinfection

- Essential part of water treatment
- Creates DBPs
- *Crypto* resists traditional disinfectants

Filtration

- Most surface water systems filter
- Key barrier against microbial contamination
- Physical process can remove *Crypto*
- Disinfection still necessary

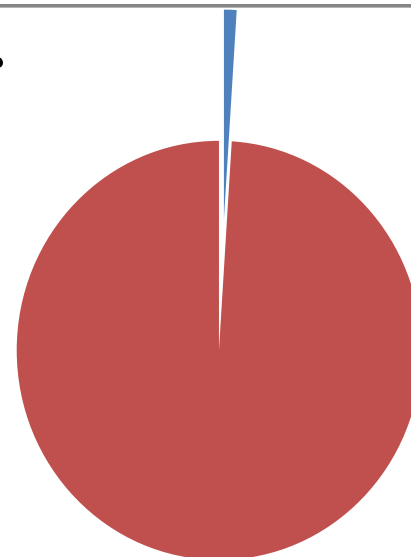




Water Distribution in Tennessee

Available Water

- 2 Trillion Gallons
Surface Water
- 200 Trillion Gallons
Ground Water





Offstream Water Use in Tennessee

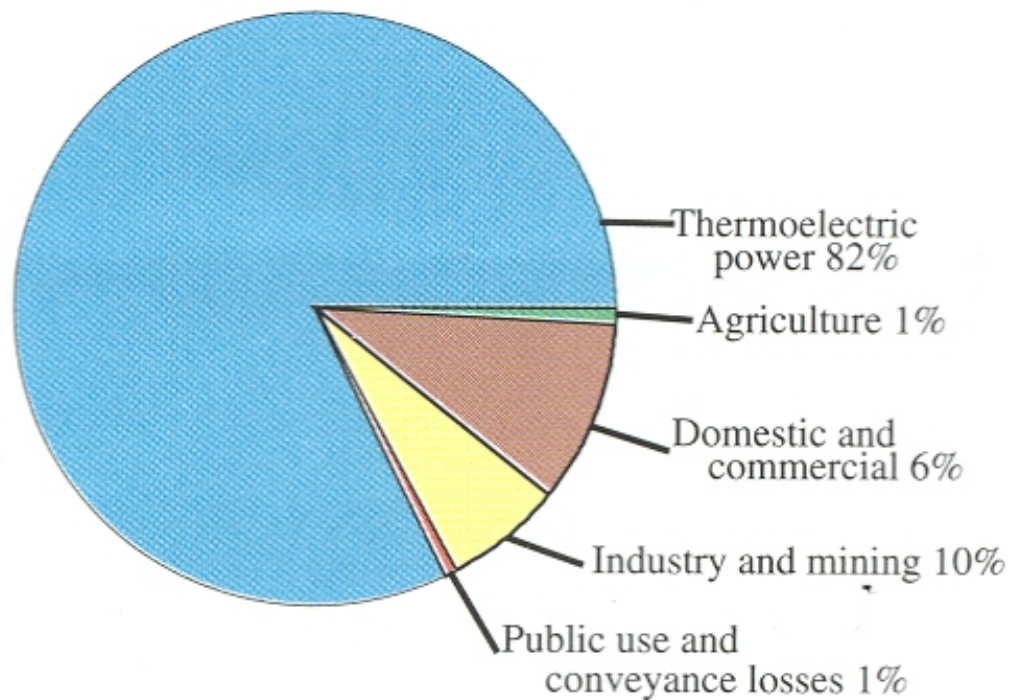


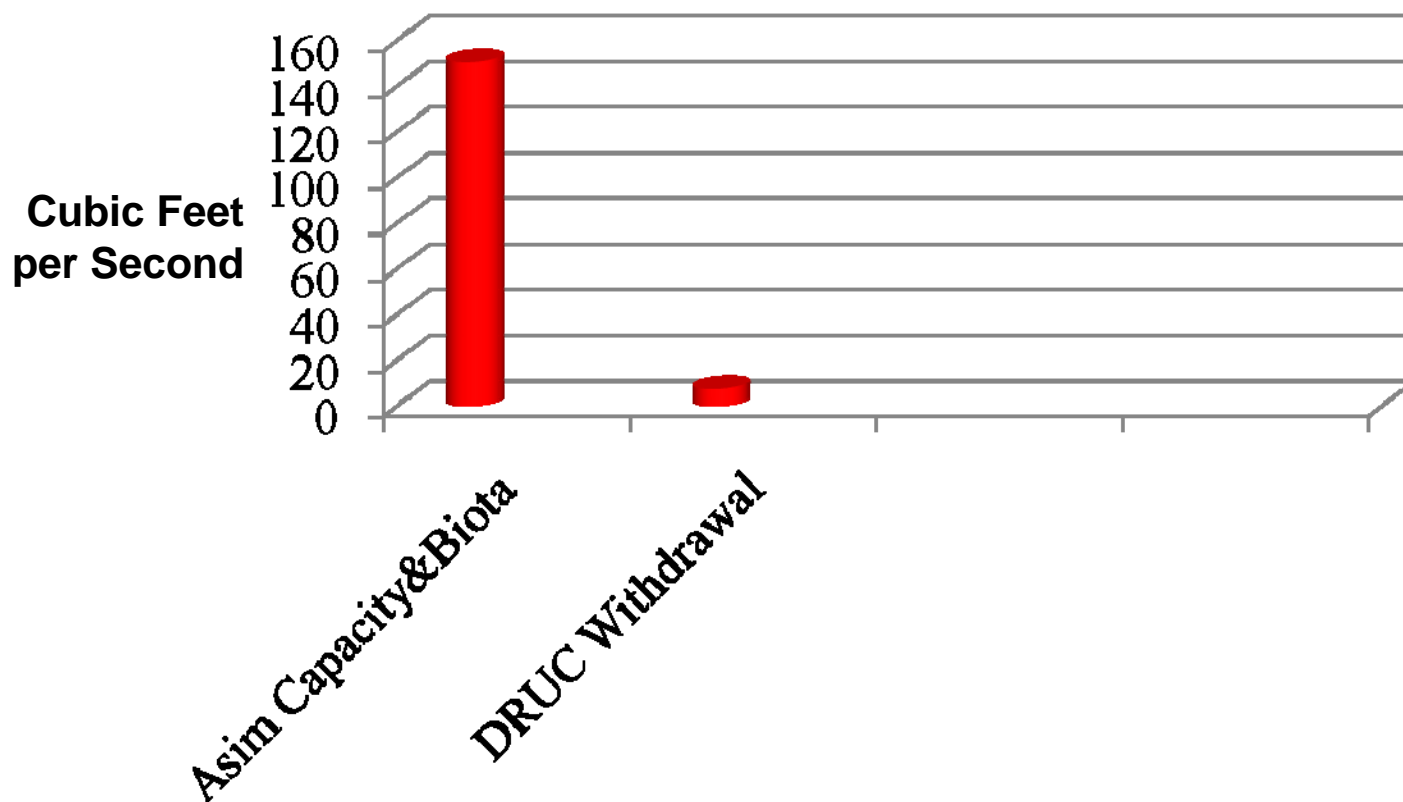
Figure 2. Offstream water use, showing categories and percent of total use.



Normandy Lake

Dam Discharge vs. Water Withdrawal

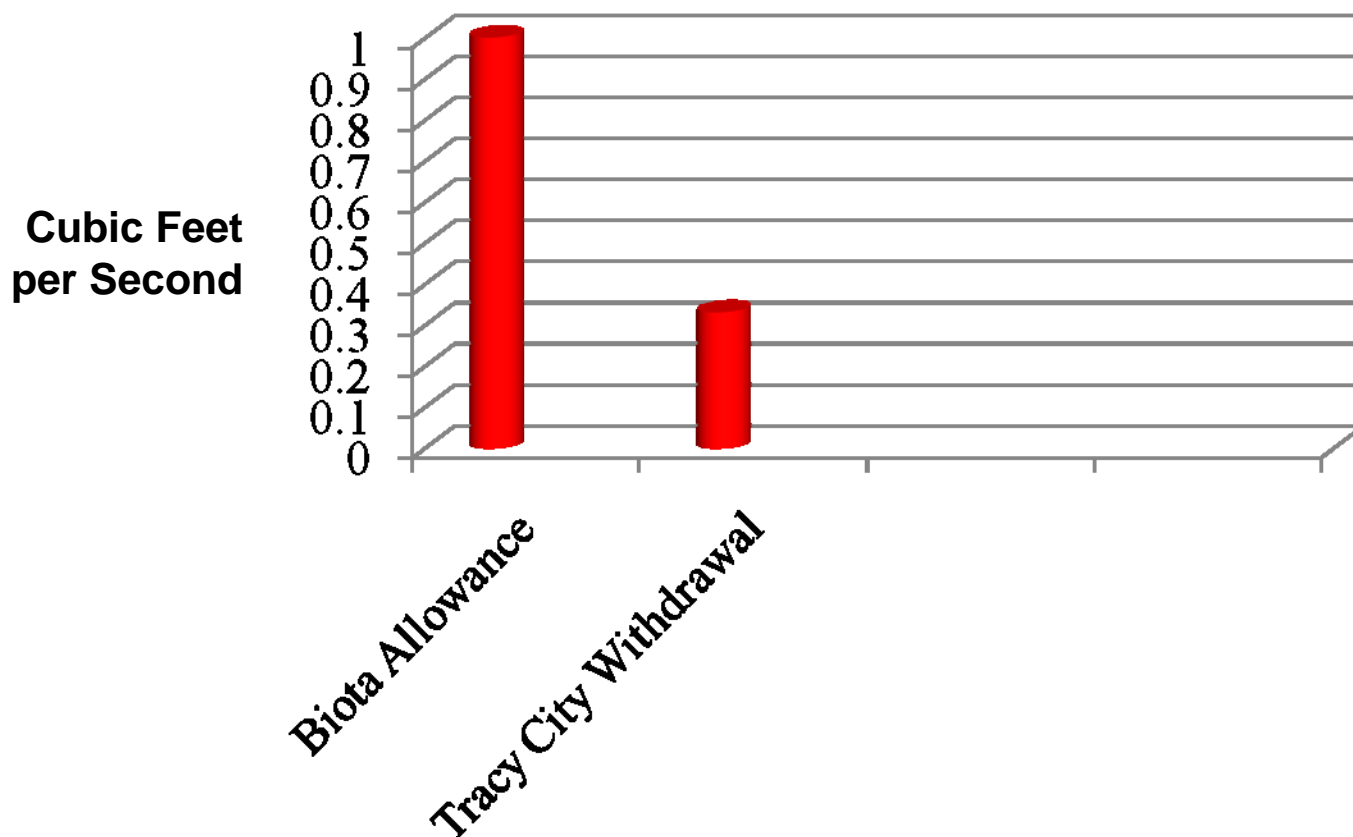
Assimilative Capacity/Biota Allowance Versus Water Supply Withdrawal





Fiery Gizzard Lake at Tracy City

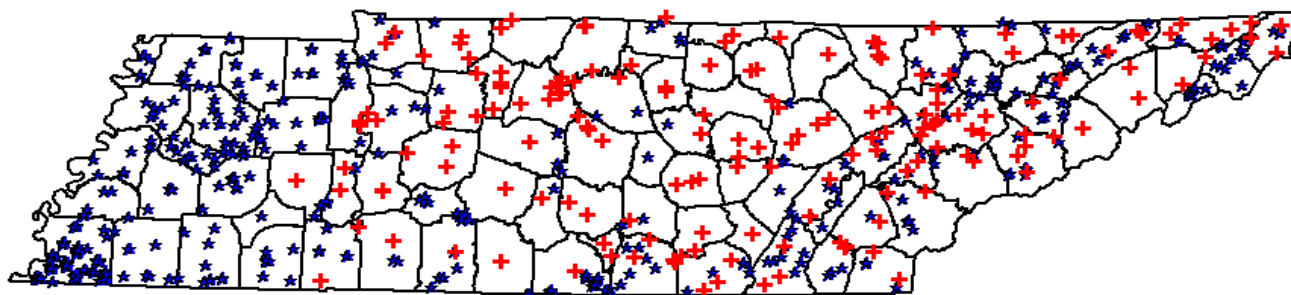
Dam Discharge vs. Water Withdrawal





Water Systems in Tennessee

Public Water System Sources
Community Ground Water Systems
Community & Noncommunity Surface Water Systems



- + Surface Water Intakes
- ★ Ground Water Withdrawals
- Counties





Duck River UC Interconnections

Parent System	1 st Consecutive System	Sells To	Population
Duck River Utility Commission			25
	Tullahoma		25,797
	Manchester	Hillsville	16,155+3,481



Cookeville Interconnections

Parent System	1 st Consecutive System	Sells To	Population
Cookeville			32,446
	Algood		8,459
	Bangham UD		6,672
	Cookeville Boat Dock UD		5,880
	Old Gainesboro UD		4,850
	Double Springs UD		6,779
	O'Connor UD		7,389
	Baxter	DeKalb UD #4, South Side UD #1, Southside UD #2	4,588+4,257



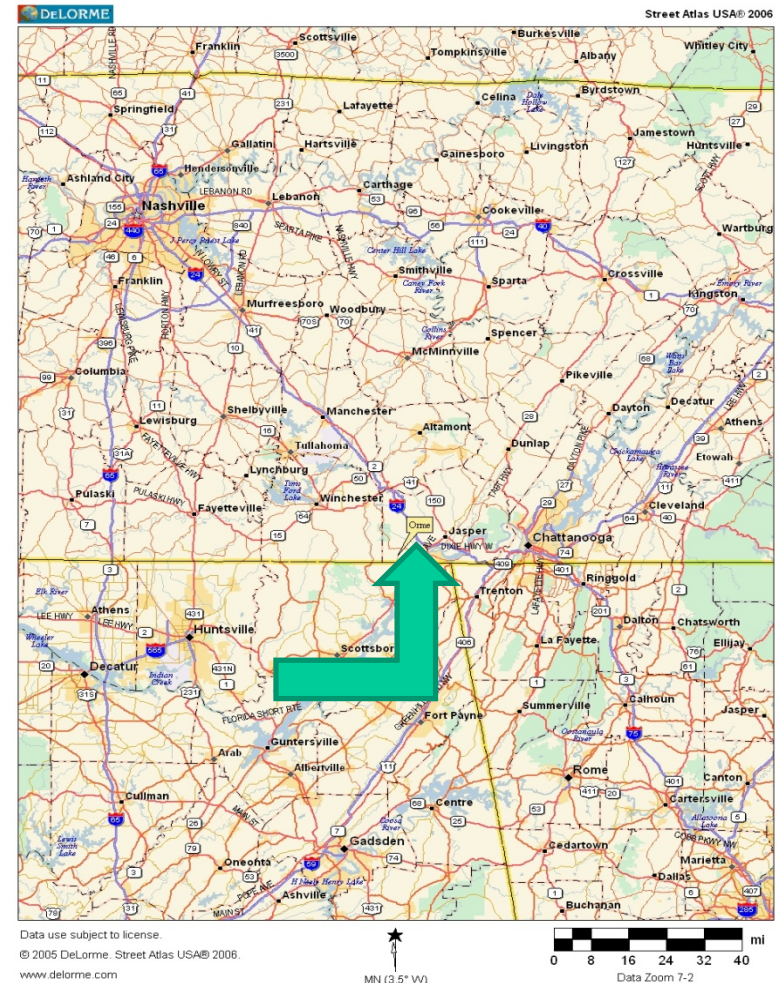
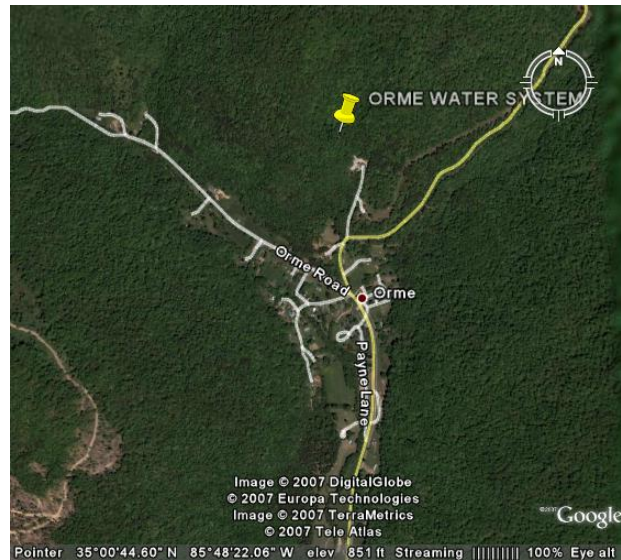
Harpeth Valley UD Interconnections

Parent System	1 st Consecutive System	Sells To	Population
Harpeth Valley UD			44,275
	Brentwood	Nolensville-College Grove, Milcrofton, Nashville, Smyrna	22,606
	Franklin	HB & TS, Mallory Valley, Milcrofton	51,061
	HB & TS	Milcrofton	17,422
	Mallory Valley UD		18,184
	Milcrofton UD	Franklin, HB & TS, Mallory Valley, Nolensville-College Grove	13,075
	River Road UD		3,370



Orme, Tennessee

Only Community System that ran completely out of water





Extraordinary Measures Taken During Drought

Maryville and Alcoa: Little River in Blount County





Questions?

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